

WHAT IS CLAIMED IS:

- Sub 1
1. A method of displaying a series of image data frames, each said image data frame comprised of a first-eye frame and a second-eye frame, said method comprising the steps of:
 - displaying a first said first-eye frame;
 - displaying a first said second-eye frame;
 - re-displaying said first said first-eye frame; and
 - re-displaying said first said second-eye frame.
 2. The method of Claim 1, further comprising the step of:
 - repeating said displaying and re-displaying steps for a second image data frame in said series.
 3. The method of Claim 1, further comprising the step of:
 - receiving said series of image data frames at a 24 Hz frame rate.
 4. The method of Claim 1, further comprising the step of:
 - receiving said series of image data frames at a 30 Hz frame rate.
 5. The method of Claim 1, further comprising the steps of:
 - receiving said series of image data frames at a 60 Hz interlaced field rate; and

converting said received series of image data

frames to a 30 Hz non-interlaced frame rate.

6. The method of Claim 1, further comprising the step of:

storing said first-eye data in a first-eye portion of said double-buffered memory.

7. The method of Claim 1 said steps of displaying and re-displaying resulting in a readout sequence of:

first-eye buffer 1;
second-eye buffer 1;
first-eye buffer 1;
second-eye buffer 1;
first-eye buffer 2;
second-eye buffer 2;
first-eye buffer 2; and
second-eye buffer 2.

8. The method of Claim 1, further comprising the steps of:

receiving dual 60 field/sec interlaced video data;
and

converting said dual 60 field/second interlaced video data to 48 frame/second progressive-scan series of said image data frames having a sequence of A₁ A₂ B₁ B₂ C₁ C₂ D₁ D₂ using a reverse 3:2 pull-

down process prior to said displaying and re-
displaying steps.

9. The method of Claim 1, further comprising the steps of:

receiving dual 24 frame/sec progressive video data; and

converting said dual 24-frame/second progressive video data to 48-frame/second progressive series of said image data frames with a data sequence of A₁ A₂ B₁ B₂ C₁ C₂ prior to said displaying and re-displaying steps.

10. The method of Claim 1, further comprising the step of:

storing said first-eye data in one portion of a double-buffered memory.

11. The method of Claim 10, said step of storing said first-eye data in one portion of a double-buffered memory comprising:

storing processed data for a second image data frame in said one portion of said double-buffered memory while data for a first image data frame is being displayed from another portion of said double-buffered memory.

12. The method of Claim 11 further comprising the step of:

alternating the storage and display of said data from frame to frame between said one portion and another portion of said double-buffered memory.

13. A display system comprising:

an image processor for receiving and processing image data;

a double-buffered memory electrically connected to said image processor for receiving and storing said processed image data;

a display device electrically connected to said double-buffered memory for reading said processed image data from said double-buffered memory and displaying said processed image data, said processed image data for a first eye read and displayed during each of two display periods, said two display periods separated by a display period for said processed image data for a second eye.

14. The display system of Claim 13 wherein double-buffered memory comprises a pair of right-eye buffers and a pair of left-eye buffers.

15. The display system of Claim 13 said data read out of said double-buffered memory in the sequence of:

first eye data from a first portion;

second eye data from said first portion;

first eye data from said first portion;

second eye data from said first portion;
first eye data from a second portion;
second eye data from said second portion;
first eye data from said second portion; and
second eye data from said second portion.

16. The display system of Claim 13, said data processor converting dual 60 field/second interlaced video data streams to a 48-frames/second progressive video data stream with a data sequence of $A_R A_L B_R B_L C_R C_L D_R D_L$ using a reverse 3:2 pull-down process.
17. The display system of Claim 13, said data processor converting dual 24 frame/second progressive data streams to a 48-frames/second progressive video data stream with a a data sequence of $A_1 A_2 B_1 B_2 C_1 C_2 D_1 D_2$.
18. The display system of Claim 13 further comprising a viewer device synchronized to said display system.
19. The display system of Claim 18, said viewer device comprising a shuttered viewer device.
20. The display system of Claim 18, said viewer device comprising a helmet.
21. The display system of Claim 18, said viewer device comprising goggles.
22. The display system of Claim 18, said viewer device comprising glasses.

23. The display system of Claim 18, said viewer device comprising polarized goggles.
24. The display system of Claim 18, said viewer device comprising polarized glasses.
25. The display system of Claim 13, said image processor storing data in one portion of said double-buffered memory while data is read out of another portion of said double-buffered memory for display.
26. The display system of Claim 25, said storing and read out of said data alternating from frame-to-frame between said two portions of said double-buffered memory.

2025 RELEASE UNDER E.O. 14176